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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/597,113	06/20/2000	Roy C. Challberg	24-AT-6005	5948
7590 04/16/2004 John S Beulick Armstrong Teasdale LLP Suite 2600 One Metropolitan Square St Louis, MO 63102-2740			EXAMINER KEITH, JACK W	
			ART UNIT 3641	PAPER NUMBER

DATE MAILED: 04/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/597,113

Applicant(s)

CHALLBERG ET AL. 

Examiner

Jack W. Keith

Art Unit

3641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 21 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4-6,8-10,12 and 13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6,8-10,12 and 13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 1/21/2004 have been fully considered but they are not persuasive.

The rejections of Paper no. 16 are herein incorporated by reference.

Applicant argues that the fuel assemblies of either Hiraiwa or Kusuno disclose fuel assemblies consisting of four mini fuel bundles and applicant's invention has separate independent fuel bundles (i.e., not mini-bundles). Applicant further cites the Advisory Action (Paper no. 18) stating that the examiner admits that the fuel assembly of Hiraiwa has only one fuel assembly per quadrant in relation to the fuel rod.

First, with regard to the fuel assemblies of either Hiraiwa or Kusuno it is well established that *Making Separable* is not indicative of Novelty. See In re Dulberg, 289 F.2d 522, 523, 129 USPQ 348, 349 (CCPA 1961). Also see MPEP § 2144.04.V.C. In the instant case it would have been obvious for one having ordinary skill in the art at the time the invention was made to have modified either Hiraiwa or Kusuno fuel assembly mini-bundles to be separable to support, among other things, refueling or dismantling of said assemblies for waste storage.

Second, as set forth in the Prior Office action (Paper no. 21) applicant's claim language reads on mini-bundle assemblies.

Finally, with regard to the Advisory Action statement wherein the examiner states that Hiraiwa has only one fuel assembly per quadrant in relation to the fuel rod is taken out of context. Prior to this statement the examiner set forth that Hiraiwa discloses a

conventional fuel assembly comprising four mini-bundles. The mini-bundles reading on applicant's claim language.

Note that applicant's amendment to the claims "fuel bundle" to "fuel assembly" appears to only strengthen the examiner's assertion that the mini-bundles of either Hiraiwa or Kusuno read on the claimed fuel assembly. That is by applicant's definition the mini-bundles of either Hiraiwa or Kusuno are actually fuel assemblies or mini-fuel assemblies.

Applicant argues that there is no motivation to combine either Hiraiwa or Kusuno with Taleyarkhan.

The examiner disagrees. Referring to the rejection a clear reason has been set forth. Taleyarkhan teaches the use of a single handle to insert or remove the fuel assembly containing the mini-fuel bundles. See figure 1.

Clearly the adaptation of individual handles for each mini-fuel bundle is in no more than the **Duplication Of Parts**. The courts have held that unless a new and unexpected result is produced a mere duplication of parts is held to be unpatentable. See MPEP § 2144.04 (VI)(B).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified mini-fuel bundles of Hiraiwa to have included individual handles, to gain the advantages thereof (i.e., *facilitate the insertion and removal of individual mini-fuel bundles providing for decreased refueling times, shutdowns, etc.*), as such results are in no more than, as set forth above, the **Duplication Of Parts**.

**Conclusion**

2. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jack W. Keith whose telephone number is (703) 306-5752. The examiner can normally be reached on Monday-Thursday 6:30-5 p.m., with Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on (703) 306-4198. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3641

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, consisting of a stylized 'J' and 'K' with a long horizontal stroke extending to the right.

Jack W. Keith  
Primary Examiner  
Art Unit 3641

jwk  
April 14, 2004